

004220" 6667560

1 / 8

Figure 1

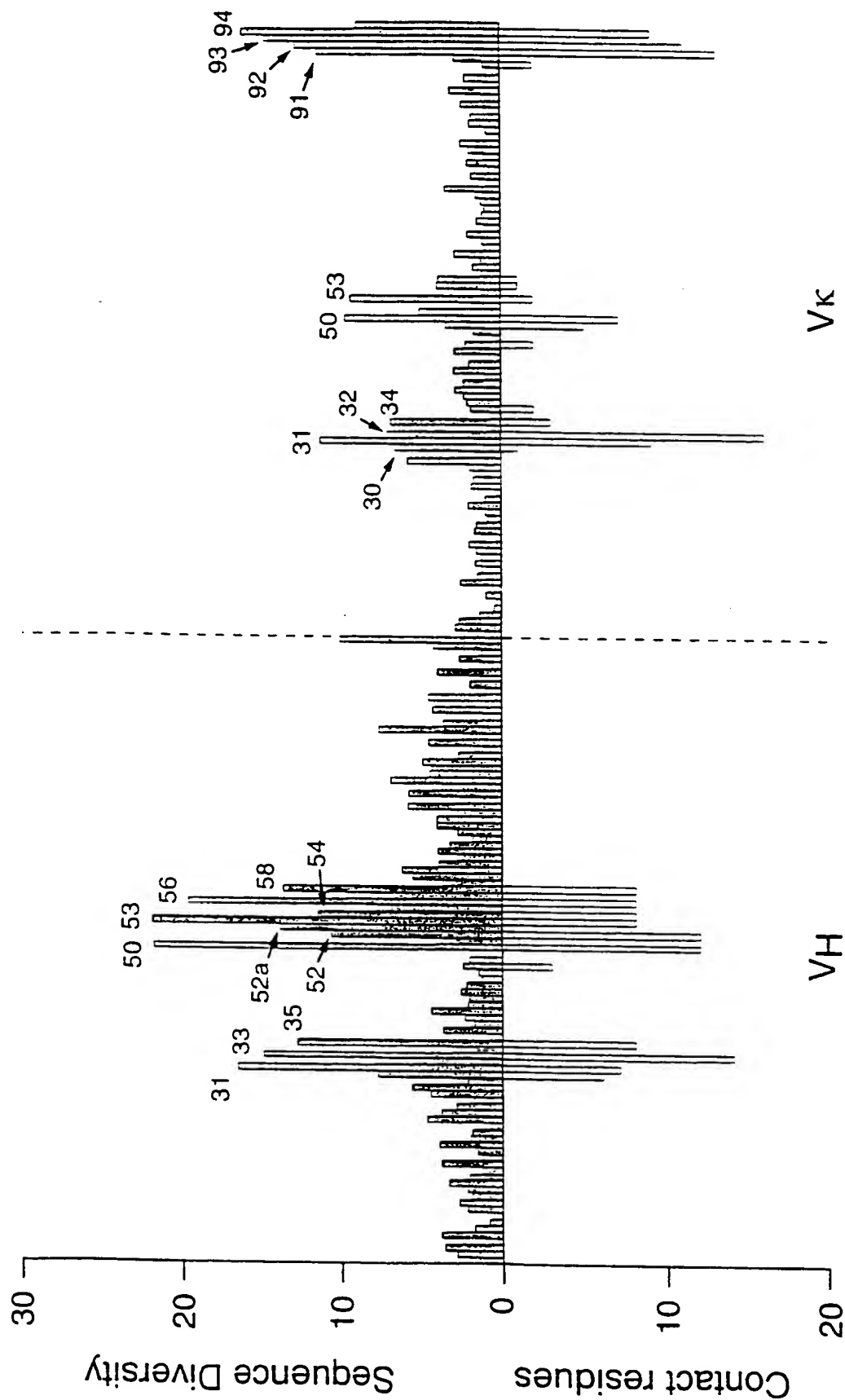


Figure 2

H11	E	V	Q	I	L	E	S	G	G	L	V	Q	P	G	G	S	L	R	L	S	C	A	A	S	G	F	T	F	S	H30	
	GAG	GTG	CAG	CTG	TTG	GAG	TCT	GGG	GGA	GGC	TTG	GTA	CAG	CCT	GGG	GGG	TCC	CTG	AGA	CTC	TCC	TGT	GCA	GCC	TCT	GGA	TTC	ACC	TTT	AGC	
H110	S	Y	A	M	S	W	V	R	Q	A	P	G	K	G	L	E	W	V	S	A	I	S	G	S	G	S	T	Y	Y		
	AGC	TAT	ACC	ATG	AGC	TGG	GTC	CGC	CAG	GCT	CCA	GGG	AAG	GGG	CTG	GAG	TGG	GTC	TCA	ACT	ACT	GGT	AGT	GGT	AGT	GGT	AGT	ACA	TAG	TAC	
																														HCDR1	
H140	S	Y	A	M	S	W	V	R	Q	A	P	G	K	G	L	E	W	V	S	A	I	S	G	S	G	S	T	Y	Y		
	AGC	TAT	ACC	ATG	AGC	TGG	GTC	CGC	CAG	GCT	CCA	GGG	AAG	GGG	CTG	GAG	TGG	GTC	TCA	ACT	ACT	GGT	AGT	GGT	AGT	GGT	AGT	ACA	TAG	TAC	
																														HCDR2	
H170	A	D	S	V	K	G	R	F	T	I	S	R	D	N	S	K	N	T	I	L	Y	L	Q	M	N	S	L	R	A	E	D
	GCA	GAC	TCC	GTG	AAG	GGC	CGG	TTC	ACC	ATC	TCC	AGA	GAC	AAT	TCC	AAG	AAC	ACG	CTG	TAT	CTG	CAA	ATG	AAC	AGC	CTG	AGA	GCC	GAG	GAC	
H190	T	A	V	Y	Y	C	A	K	S	Y	G	A	F	D	Y	W	G	Q	G	T	L	V	T	V	S	S	G	G	G		
	ACG	GCC	GTA	TAT	TAC	TGT	GCG	AAA	AGT	TAT	GGT	GCT	TTT	GAC	TAC	TGG	GGC	CAG	GGA	ACC	CTG	GTC	ACC	GTC	TCC	AGC	GGT	GGA	GGC	GGT	
																														HCDR3	
L1	S	G	G	G	G	S	G	G	G	G	S	T	D	I	Q	M	T	Q	S	P	S	S	L	S	A	S	V	G	D	R	
	TCA	GGC	GGA	GGT	GGC	AGC	GGC	GGT	GGC	GGG	TGG	ACG	GAC	ATC	CAG	ATG	ACC	CAG	TCT	CCA	TCC	TCC	TCC	CTG	TCT	GCA	TCT	GTA	GGA	GAC	
																														SalI	
L20	V	T	I	T	C	R	A	S	Q	S	I	S	S	Y	L	N	W	Y	Q	Q	K	P	G	K	A	P	K	L	L	I	
	GTC	ACC	ATC	ACT	TGC	CGG	GCA	AGT	CAG	AGC	ATT	AGC	AGC	TAT	TTA	AAI	TGG	TAT	CAG	CAG	AAA	CCA	GGG	AAA	GCC	CCT	AAG	CTC	CTG	ATC	
																														LCDR1	
L50	Y	A	A	S	S	L	Q	S	G	V	P	S	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	S	L	
	TAT	ACT	GCA	TCC	AGT	TTG	CAA	AGT	GGG	GTC	CCA	TCA	AGG	TTT	AGT	GGC	AGT	GGA	TCT	GGG	ACA	GAT	TTC	ACT	CTC	ACC	ATC	AGC	AGT	CTG	
																														LCDR2	
L80	Q	P	E	D	F	A	T	Y	Y	C	Q	Q	S	Y	S	T	P	N	T	F	G	Q	G	T	K	V	E	I	K	R	
	CAA	CCT	GAA	GAT	TTT	GCA	ACT	TAC	TAC	TGT	CAA	CAG	AGT	TAC	AGT	AGC	CCT	AAI	ACG	TTC	GGC	CAA	GGG	ACC	AAG	GTG	GAA	ATC	AAA	CGG	
																														LCDR3	
																														L107	

□ Diversified in "Primary" library only

□ Diversified in "Somatic" library only

□ Diversified in "Primary" and "Somatic" Libraries

"primary" NNK library before pre-selection

OD₄₅₀₋₆₅₀

0-0.2

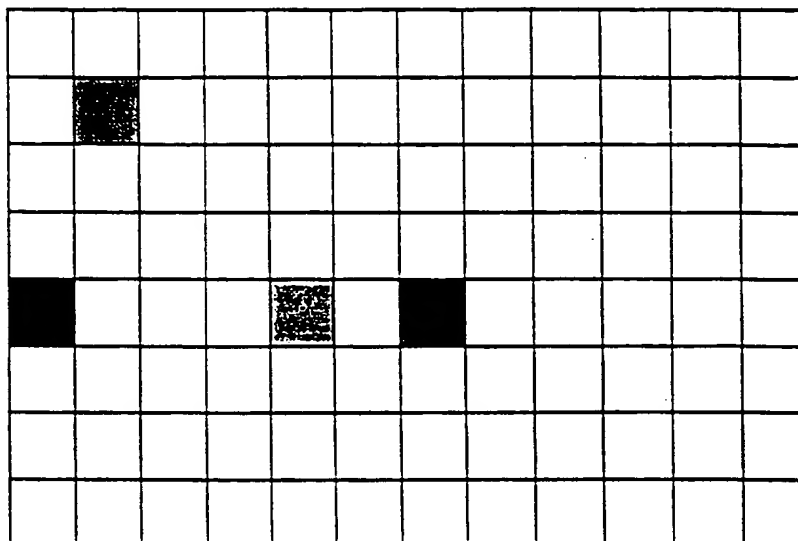
0.2-0.4

0.4-0.6

0.6-0.8

0.8-1.0

>1.0



"primary" NNK library after pre-selection

OD₄₅₀₋₆₅₀

0-0.2

0.2-0.4

0.4-0.6

0.6-0.8

0.8-1.0

>1.0

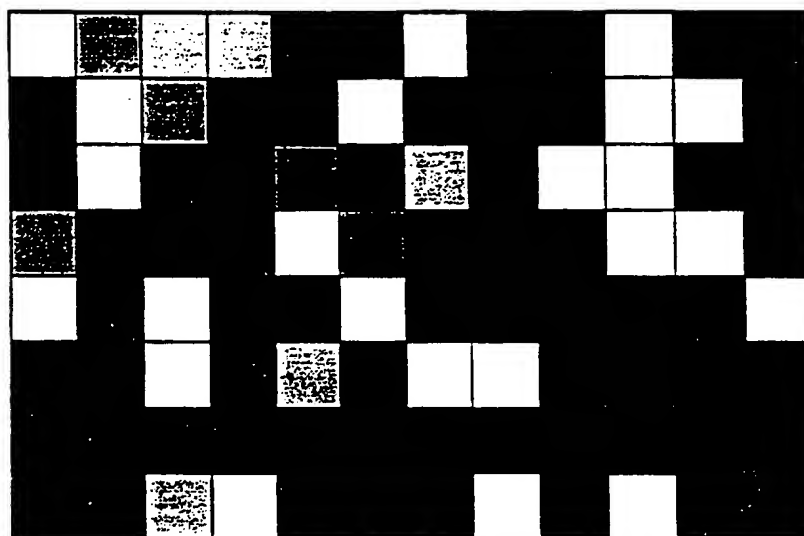


Figure 3

Figure 4

Clones	Antigen	Library	Heavy chain (framework: DP47)			Light chain (framework: DPK9)			No.
			CDR1	CDR2	CDR3	CDR1	CDR2	CDR3	
UBA 1-9	Bovine Ubiquitin	Primary/NNK	SYAMS	IGSEGWPTIYADSVKG	GGSMFDY	RASQSISSYLN	RASSLOS	QQSSNTPTYT	9
UBB 1,3,10	"	Somatic/NNK	AYAMT	AISGGGSTYADSVKG	KASSFDY	RASQSISSYLN	AASSLOS	QQSYSTPST	9
BPA 1-3,6,9	Rat BIP	Primary/NNK	SYAMS	LISPLGKDTSYADSVKG	RAGIFDY	RASQSISSYLN	HASRLQS	QQYRLRPIT	5
BPA 4	"	"	SYAMS	GIRRVGQATSYADSVKG	GGRLFDY	RASQSISSYLN	YASHLOS	QQYLLDPYT	1
BPA 5,7,9	"	"	SYAMS	ANTKGMITDYADSVKG	GSOAFDY	RASQSISSYLN	QASFLQS	QQGYNKPRT	3
BPB 1-4,6-10	"	Somatic/NNK	NYQMH	AISGGGSTYADSVKG	GTRRFDY	RASQSISSYLN	AASSLOS	QQSYSTPTYT	9
HSA 1,2,7-8	Bovine Histone	Primary/NNK	SYAMS	AISPKGRHTIYADSVKG	RDKLFDY	RASQSISSYLN	EASTLOS	QQEKNMPLT	4
HSA 6	"	"	SYAMS	RITPAGRHITTYADSVKG	PSPPFDY	RASQSISSYLN	HASLOS	QQGQHRPIT	1
HSA 3,9	"	"	SYAMS	RITPAGRHITTYADSVKG	QVSRFDY	-	-	-	2
HSA 10	"	"	SYAMS	TISPOGLRITTYADSVKG	GRPRFDY	-	-	-	1
HSA 4	"	"	SYAMS	TISPKGRSTTYADSVKG	TNRSDY	RASQSISSYLN	RASFLQS	QQRAKKPPT	1
HIS B 1,3	"	Somatic/NNK	KYRME	AISGGGSTYADSVKG	GRWPFDY	RASQSISSYLN	AASSLOS	QQSYSTPHT	2
HIS B 6	"	"	RYRME	AISGGGSTYADSVKG	NEPRFDY	RASQSISSYLN	AASSLOS	QQSYSTPST	1
HIS B 2	"	"	RYRME	AISGGGSTYADSVKG	GYRKFDY	RASQSISSYLN	AASSLOS	QQSYSTPIT	1
HIS B 4,7,9	"	"	RYRME	AISGGGSTYADSVKG	GYRKFDY	RASQSISSYLN	AASSLOS	QQSYSTPPT	3
HIS B 5,8	"	"	RYRME	AISGGGSTYADSVKG	GYRKFDY	RASQSISSYLN	AASSLOS	QQSYSTPPT	2
NIP A 2,7,10	NIP-BSA	Primary/NNK	SYAMS	RIPARGITVTHYADSVKG	GGRLFDY	RASQSISSYLN	HASALQS	QQSYRKPTT	3
NIP A 3	"	"	SYAMS	GISHGSGNTRYADSVKG	RHKGFYD	RASQSISSYLN	RASLOS	QQGYRFPAT	1
NIP A 5,6,9	"	"	SYAMS	RIAPGGGRTKYADSVKG	GRYWFYD	RASQSISSYLN	RASLOS	QQSFNAPIT	3
NIP A 1,8	"	"	SYAMS	TISYLGKRTYADSVKG	SRRTFDY	RASQSISSYLN	KASTLOS	QQRSRPAT	2

Figure 4 Cont.

NIP B 1	"	Somatic NNK	RYGMH	AISGGGGSTYYADSVKG	RGLGFDY	RASQSISSYLN	AASSLOS	QOYSTPLT	1
NIP B 2,4,7	"	"	SYRMV	AISGGGGSTYYADSVKG	RGMAFDY	RASQSIHRLS	AASSLOS	QOYSTPLT	4
NIP B 5,6	"	"	KYNMH	AISGGGGSTYYADSVKG	ARWRFDY	RASQSISSYLN	AASSLOS	QOYSTPIT	2
NIP B 8	"	"	RYRMH	AISGGGGSTYYADSVKG	TPRPFYD	RASQSIQMGLS	AASSLOS	QOYSTPNT	1
NIP B 9	"	"	RYRMH	AISGGGGSTYYADSVKG	TPRPFYD	RASQSIENIL	AASSLOS	QOYSTPLT	1
10 OG 1	FTC-BSA	Primary NNK	SYAMS	ITSPYCKQTRYADSVKG	KSQHFDY	RASQSISSYLN	AASRLQS	QQRGGGPPPT	1
10 OG 2	"	"	SYAMS	ITTPRGSLTSYADSVKG	TAPPFYD	RASQSISSYLN	FAFRLQS	QOQRIKPST	1
10 OG 3	"	"	SYAMS	GISAYGTVTYADSVKG	RRAGFDY	RASQSISSYLN	FAFRLQS	QQPRHMPQT	1
10 OG 5	"	"	SYAMS	STINSGLATAYADSVKG	RSFRFDY	RASQSISSYLN	HAFLQS	QQRHINPPT	1
10 OG 6	"	"	SYAMS	GITTRGQITRYADSVKG	TYPKFDY	RASQSISSYLN	NAFRLQS	QOQKLSPT	1
10 OG 7	"	"	SYAMS	ITPARCGHTKYADSVKG	SAKAFDY	RASRSISSYLN	QASRLQS	QQRSAGPLT	1
10 DH 1	"	Somatic NNK	MYRMG	AISGGGGSTYYADSVKG	RTFRFDY	RASQSIHRLS	AASSLOS	QOYSTPHT	1
10 DH 2,3	"	"	SYAMT	AISGGGGSTYYADSVKG	KTGMFDY	RASQSIHRLR	AASSLOS	QOYSTPHT	2
11 OG 1	Human	Primary NNK	SYAMS	AINRRGSAITRYADSVKG	YLIHFDY	RASQSISSYLN	FAFRLQS	QHPGLRPQT	1
11 OG 2,3	boon	"	SYAMS	AINRRGSAITRYADSVKG	YLIHFDY	RASQSISSYLN	AASALQS	QOQDLPPST	2
11 DH 2	"	Somatic NNK	RYRMV	AISGGGGSTYYADSVKG	RPSTFDY	RASQSIKRLS	AASSLOS	QOYSTPST	1
11 DH 3	"	"	RYRMV	AISGGGGSTYYADSVKG	RPSTFDY	RASQSIKRLH	AASSLOS	QOYSTPST	1
12 OG 1,2	Human	Primary NNK	SYAMS	SIAPAGRIHTYADSVKG	NIRIFDY	RASQSISSYLN	SASFLOS	QQRAGTPVT	2
12 OG 3	thyroglobulin	"	SYAMS	GITMTGHTTKYADSVKG	NSMIFDY	RASQSISSYLN	QASRLQS	QQRVLRPPT	1
12 DH 1,2,3	"	Somatic NNK	RYEMS	AISGGGGSTYYADSVKG	GFIYAFDY	RASQSIKRLT	AASSLOS	QOYSTPHT	3
13 OG 1	BSA	Primary NNK	SYAMS	ITIASGPNTRYADSVKG	NHSTFDY	RASQSISSYLN	FAFRLQS	QQNHTAPHT	1
13 OG 2	"	Primary DVT	SYAMS	TTYAGSNITYADSVKG	GYTTFDY	RASQSISSYLN	YASRLQS	QOQDTSPTT	1

Figure 4 Cont.

13CG3	"	Primary/NK	SYAMS	<u>M</u> NP <u>G</u> G <u>Y</u> :TKYADSVKG	<u>N</u> AD <u>L</u> FDY	RASQSISSYLN	TASFLQS	QQMPRK <u>P</u> AT	1
13DH1	"	Somatic/NK	<u>L</u> YN <u>M</u> V	AISGGGGSTYYADSVKG	<u>E</u> WSRFDY	RASQSIK <u>S</u> LJ	AASSLQS	QQSYSTP <u>K</u> T	1
13DH2	"	"	<u>G</u> Y <u>M</u> S	AISGGGGSTYYADSVKG	<u>T</u> HDSFDY	RASQSIDR <u>V</u> LN	AASSLQS	QQSYSTP <u>I</u> T	1
13DH3	"	"	<u>R</u> YQ <u>M</u> V	AISGGGGSTYYADSVKG	<u>H</u> LSRFDY	RASQSIK <u>N</u> LA	AASSLQS	QQSYSTP <u>P</u> T	1
14CG1,2,3	Hen egg lysozyme	Primary/NK	SYAMS	<u>E</u> ILPRGHRTAYADSVKG	<u>S</u> GK <u>H</u> FDY	RASQSISSYLN	NASTLQS	QQRK <u>L</u> P <u>E</u> T	3
14DH2,3	"	Somatic/NK	<u>Y</u> Y <u>E</u> M <u>L</u>	AISGGGGSTYYADSVKG	<u>P</u> FM <u>S</u> FDY	RASQSIH <u>D</u> LV	AASSLQS	QQSYSTP <u>P</u> T	2
19CG1,3	Mouse IgG	Primary/DVT	SYAMS	<u>S</u> IGSSGYGTGYADSVKG	<u>G</u> YY <u>S</u> FDY	RASQSISSYLN	DASSLQS	QQSDSSP <u>Y</u> T	2
19DH2	"	Somatic/DVT	<u>D</u> Y <u>D</u> M <u>S</u>	AISGGGGSTYYADSVKG	<u>D</u> GAGFDY	RASQSIGSS <u>L</u> S	AASSLQS	QQSYSTP <u>N</u> T	1
20CG1	Human IgG	Primary/NK	SYAMS	AISGLGKQTRYADSVKG	<u>G</u> YSRFDY	RASQSISSYLN	SASLQS	QQLGTP <u>P</u> RT	1
20DH1	"	Somatic/NK	<u>R</u> Y <u>E</u> M <u>S</u>	AISGGGGSTYYADSVKG	<u>S</u> WT <u>L</u> FDY	RASQSI <u>F</u> IN <u>D</u>	AASSLQS	QQSYSTP <u>P</u> T	1
20DH2	"	"	<u>R</u> Y <u>E</u> M <u>S</u>	AISGGGGSTYYADSVKG	<u>S</u> WT <u>L</u> FDY	RASQSIGT <u>L</u> LR	AASSLQS	QQSYSTP <u>N</u> T	1

* of clones sequenced

Figure 5a

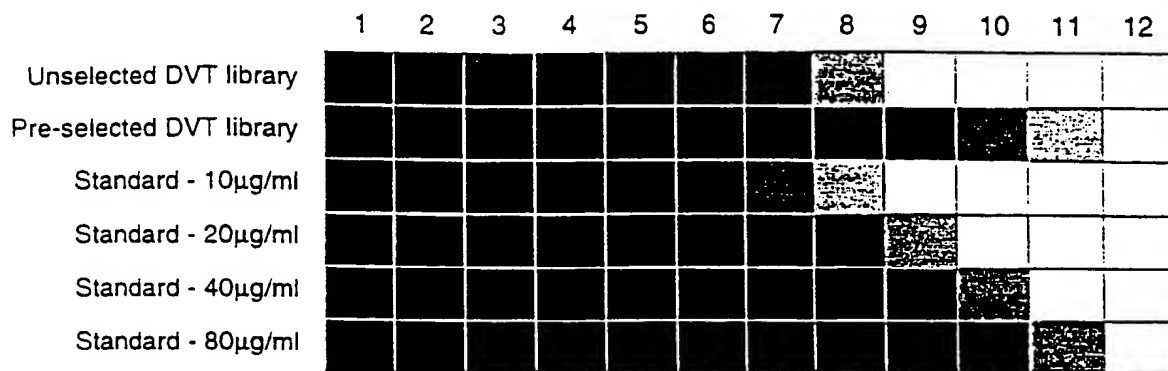


Figure 5b

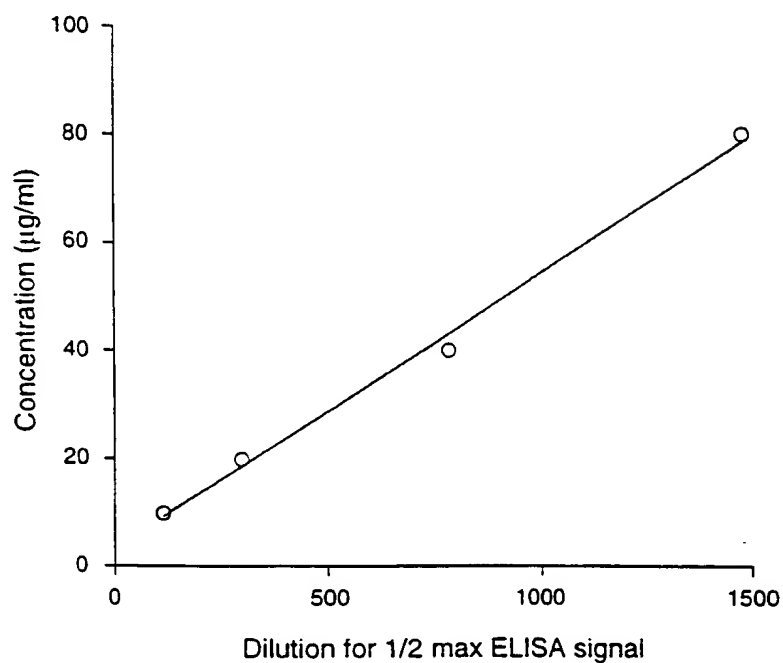
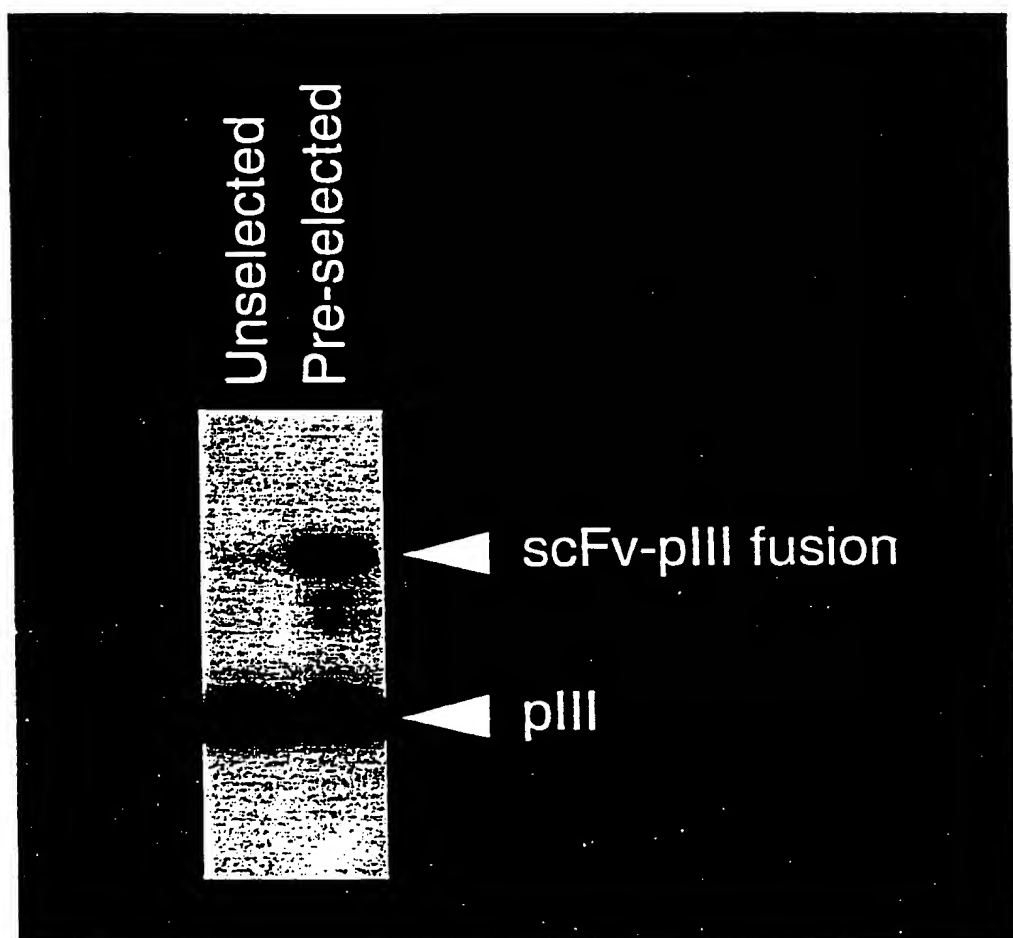


Figure 6



004220" 6E6T560